

Peer Review File

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Reviewer A

This submission describes a fairly classic case of severe COVID-19 infection. Unfortunately, there isn't anything particularly novel about this case so I think there is unlikely to be significant interest in this case/images.

Response: Thank you very much for your comments.

After the liberalization of the epidemic situation in our country, most of the patients infected with COVID-19 were not seriously ill. However, some patients infected with COVID-19 will become severe cases for lung transplant patients who have been using anti-rejection drugs. The diagnosis and treatment of this type of patient are very important.

Reviewer B

I was honored to review the manuscript entitled COVID-19 infection in a lung transplant patient.

Unfortunately, in my opinion, the case report does not add new information.

Response: Thank you very much for your comments.

Patients with lung transplantation and ordinary patients infected with COVID-19 often have different clinical manifestations. First, long-term use of anti-rejection drugs in patients after lung transplantation leads to lower immunity and easier infection of COVID-19. Moreover, some patients have severe hypoxemia and ARDS.

Reviewer C

Interesting paper, no corrections are needed.

Response: Thank you very much for your comments.

Thank you very much for your positive feedback.

Reviewer D

Congratulations on your case report/image about this 64-year-old LuTX patient who

was struggling with a severe COVID-19 infection.

Overall, I think the article is well written, with concise language and the case is well presented.

I only have a few minor questions that came up while reviewing the paper that require only minor changes:

1) You mention that "the patient presented with severe dyspnea and COVID-19" (line 6). If available, it would be good to add vital signs such as oxygen saturation at the time of admission. In our experience, COVID-19 infections in patients who have undergone lung transplantation show very heterogeneous symptoms. However, I was wondering if there is any objectifiable data on COVID-19 infection, such as cycle threshold or viral copy number?

Response: Thank you very much for your suggestions. At admission, the patient's heart rate was 92 beats per minute, blood oxygen saturation was 91%, and breathing was 24 breaths per minute under low flow oxygen supply. However, there is only a positive nucleic acid test result, and there is no cycle threshold or virus copy number.

2) Figure 2 shows a CT scan of the lungs before COVID infection. Was there a reason for the CT scan, e.g. a clinical suspicion of CLAD or RAS? Or was it just a routine CT scan? Perhaps you can provide some background information on the scan.

Response: Thank you very much for your suggestions. Figure 2 shows the CT scan of the patient from September 24, 2022. After lung transplantation, the patient usually needs to have a chest CT scan reviewed every six months.

Changes: Figure 2 shows a CT scan of the chest 3 months before COVID-19 infection for regular follow-up.

3) We see many LuTX patients on immunosuppressive medication who become asymptomatic relatively quickly but still have a CT score >30 and a low but persistent viral copy number.

Did the patient test negative for COVID-19 at the time of discharge?

Response: Thank you very much for your comments. You are absolutely right. After lung transplantation, patients have indeed become asymptomatic correlated quickly but still have a CT score >30 and a low but persistent viral copy number. The patient was discharged from the hospital with no negative test for COVID-19. Generally, after the clinical symptoms of such patients have improved significantly, we let them

leave the hospital, mainly for the following reasons: 1. When the epidemic situation was just released in China, almost every patient after lung transplantation needed hospitalization, and medical resources were seriously insufficient 2. After the symptoms of patients after lung transplantation had improved significantly, COVID-19 was still positive for a long time.

4) I am wondering if you observed any residuals in terms of lung function at discharge? Was there a decrease in FEV1?

Response: Thank you very much for your suggestions. This patient did not undergo lung function testing upon discharge. After the patient's clinical symptoms improved significantly, we discharged the patient from the hospital.